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Apr. 2003

PHOBOS

NODE: RC13

ALARM CODE 818.0
RESTORE 818.1

LOCATION: BLDG. 1010

SYSTEM: PHOBOS MAGNET COOLING - COMMON ALARM

**ACTION: DETERMINE WHICH SIGNAL IS IN ALARM AND TURN TO
ALARM RESPONSE SHEET FROM LIST BELOW**

<u>NODE</u>	<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
RC13	MAGFLO	Magnet Water Flow	818.0-1
RC13	MAGTEMP	Magnet Water Supply Temp.	818.0-2
RC13	MAGLVL	Magnet Water Level	818.0-3
RC13	MAGRESIS	Magnet Water Resistivity	818.0-4
RC13	MAGMKUP	Magnet Water Makeup Gallons	818.0-5

**NOTE: IF ALARM IS INTERMITTENT, CHECK MKUP
DISPLAY & TREND FOR WATER LOSS**

818.0-1

ALARM RESPONSE SHEET - PHOBOS MAGNET COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
MAGFLOW	Mag Water Flow	(Hi/Lo/LoLo) 150/70/40 GPM

- ACTION:**
1. Verify low flow ≤ 70 GPM
 2. Advise MCR (Pumps will stop @ ≤ 40 GPM)
 3. Check 1010 Pump Rm Lines for major leak
 4. Check other system parameters:
 - a) Level is ≥ 9 inches
 - b) Pressure is between 160 and 75 psig
 - c) If actual parameters are less than a) or outside limits of b), turn off pump (p4 or p5)
 5. Note 3 & 1

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - PHOBOS MAGNET COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
MAGTEMP	Mag Water Supply Temp.	(H.Hi/Hi/Lo) 110/105/65° F

- ACTION:**
1. Verify temp is outside limits
 2. Verify that tower water temp is within limits. 90/65° F
 - a) If not, see that response sheet
 3. Verify that tower water flow is within limits ≥ 75 GPM
 - a) If not, see that response sheet
 4. For HiTemp alarm Output signal to TCV-100%
 - 4a. If H.Hi temp (105f) is reached, pumps will shut off after 60 seconds
 5. Note 3 & 1

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - PHOBOS MAGNET COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
MAGLVL	Mag Water Level	(Hi/Lo/LoLo) 25/9/2 inches

- ACTION:**
1. Verify level is outside Hi/Lo limits
 2. Inspect area for leaks
 3. Notes 1 & 3

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - PHOBOS MAGNET COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
MAGRESIS	Mag Water Resistivity	(Hi/Lo/LoLo) NA/.5/megohm-cm

- ACTION:**
1. Verify resistivity is outside limits
 2. Observe that flow is thru deionizer
 3. Observe deionizer output resistivity (2-16 megohm-cm)
 4. Observe that system resistivity rises above .5 megohm
 5. If Lo Alarm remains - Note 3 the following morning.

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - PHOBOS MAGNET COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
MAGMKUP	Mag Water Make-up Flow	(Hi/HiHi) 25 GAL in 10 min 50 GAL in 10 min

- ACTION:**
1. Check 1010 Pump Room Lines for leak(s).
 2. Advise MCR, isolate leaking device
 3. Notes 1 & 3

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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PHOBOS

NODE: RC13

ALARM CODE 818.2
RESTORE 818.3

LOCATION: BLDG. 1010

SYSTEM: PHOBOS TOWER - COMMON ALARM

**ACTION: DETERMINE WHICH SIGNAL IS IN ALARM AND TURN TO
ALARM RESPONSE SHEET FROM LIST BELOW**

<u>NODE</u>	<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
RC13	<u>TWRFLOW</u>	<u>Tower Water Flow</u>	<u>818.2-1</u>
RC13	<u>TWRTEMP</u>	<u>Tower Water Supply Temp</u>	<u>818.2-2</u>
RC13	<u>TWRLVL</u>	<u>Tower Water Level</u>	<u>818.2-3</u>

**NOTE: IF ALARM IS INTERMITTENT, CHECK MKUP
DISPLAY & TREND FOR WATER LOSS**

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ALARM RESPONSE SHEET - PHOBOS TOWER COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
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TWRFLOW	Tower Water Flow	(Lo/LoLo) 75/30 GPM
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- ACTION:**
1. Verify flow is outside limits
 - a) If flow is <50 advise MCR & turn off pump(s)
 2. Check 1010 for major leak
 3. Check other system parameters @ 1010:
 - a) Pump discharge is between 8 - 20 psig
 - b) Pump suction is between +2 & -20 in Hg
 - c) Tower basin water level >2.0 FT
 4. Note 3 & 1

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - PHOBOS TOWER COOLING

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
TWRTEMP.SUP	Tower Water Supply Temp	(Hi/Lo/LoLo) 90/65° F

- ACTION:**
1. Verify temp is outside limits
 2. Check that tower fan switch is in Auto
 - a) If not, place switch in Auto
 3. For HiAlarm fan should be in HiSpeed and water flow to top of tower
 - a) If not, redirect water to top with tower valve
 - b) If fan does not operate in Auto, place fan switch in manual, slow speed fwd and observe temp.
 - c) Place in HiSpeed fwd only if temp remains above 90° F
 4. For LoAlarm fan should be off
 5. Notes 1 & 3

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - PHOBOS

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u> (Lo/LoLo)
TWRLVL	Tower Water Level	25/20 (29.25"-32.75"=Normal)

- ACTION:**
1. Verify level is outside Lo limits
a) Pumps shut down @ $\leq 25"$
 2. Inspect B1010 pump room and tower for leaks.
 3. For Low Level:
If no leaks check that TWRMKUP.OK light is on.
If not: Open bypass valve at solenoid until level = 32.75", then close bypass valve.
 4. Notes 1 & 3

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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